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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,220	09/18/2006	Masanori Hashiba	2418.99US01	7045
7590 02/03/2009				
Douglas J Christensen Patterson Thuente Skaar & Christensen 4800 IDS Center 80 South 8th Street Minneapolis, MN 55402			EXAMINER BLADES, JOHN	
			ART UNIT 4122	PAPER NUMBER
			MAIL DATE 02/03/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/593,220

## Applicant(s)

HASHIBA ET AL.

## Examiner

JOHN BLADES

## Art Unit

4122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/88)  
Paper No(s)/Mail Date 09/18/06, 07/23/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

Claims 1-4 are pending as amended on 09/18/2006.

### *Specification*

1. The language used in the abstract has not been carefully selected to generally and summarily describe the invention to the average reader. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ikeda et al.*, JPO 2003-184902 in view of *Imamura et al.*, USPAT No. 5605981. Ikeda and Imamura both teach processes for the molding of polylactic acid with woody materials, which form a molded product with minimal environmental load ([0011] & [Col. 19, 29-32], respectively). Ikeda teaches compression molding of cellulose fiber with polylactic acid at a temperature above the melting point of the polylactic acid [0011], but does not expressly disclose *use of inorganic filler or holding the product at or near a certain temperature to crystallize the polylactic acid*. However, Imamura teaches an embodiment in which “the mold can be heated to a temperature of not lower than the crystallization temperature to positively promote crystallization, making it possible to improve the heat resistance of the product” [Col. 20, 21-26]. Imamura also describes the known practice of adding inorganic materials such as talc to fill out these molded products and potentially act as nucleating agents: “during the formation of sheet or film, an ordinary filler such as inorganic filler (e.g., talc...) and organic filler (e.g., woodmeal) may be incorporated in the material” [Col. 19, 29-32]. Here, the term ‘incorporated’ is also viewed as equivalent to the term ‘dispersed’ (claim 2) as used by the applicant. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the ingredients and temperatures

taught by Imamura with the molding method of Ikeda. The rationale to do so would have been that adding these known steps to the Ikeda process would predictably result in filling out the molded material as needed and the crystallization of the polylactic acid.

4. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Ikeda et al.*, JPO 2003-184902 in view of *Imamura et al.*, USPAT No. 5605981 as applied to claim 1 above and further in view of *Shiraishi et al.*, USPAT No. 6150438. Whereas Ikeda and Imamura combine to teach all the limitations of claims 1-3 as detailed above, they do not teach the preparation of base material *in a ratio of wood:polymer that ranges from 7:3 to 5:5 by weight*. However, Shiraishi teaches a '95-5:5-95' range for combining these ingredients that completely encloses the claimed '7-5:3-5' range [Col. 3, 21-26]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to practice the process of Ikeda and Imamura with the amounts of materials supplied in the wood:polymer ratios of Shiraishi. The rationale to do so would have been that this would predictably result in a molded product that corresponds to an appropriate density or cost of materials. Further, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimum or

workable ranges involves only ordinary skill in the art. See MPEP 2144.05(II) and *In re Aller*, 220 F2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN BLADES whose telephone number is (571)270-7661. The examiner can normally be reached on M-F, 7:30AM-5PM (except alt. Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

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would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JB/  
Patent Examiner, GAU 4122

/Timothy J. Kugel/  
Primary Examiner, Art Unit  
1796